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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/618,127

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Gopal Dommety

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08/19/2008

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EXAMINER

YALEW, FIKREMARIAM A

ART UNIT

PAPER NUMBER

2136

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/618,127	Applicant(s) DOMMETY ET AL.	
	Examiner Fikremariam Yalew	Art Unit 2136	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11,23-25,27-32 and 34-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 and 13 is/are allowed.
- 6) ☐ Claim(s) 1-11,23-25,27-32 and 34-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/29/2008 has been entered.
2. Claims 14-22 are canceled and claims 2,26,33 were previously canceled. Claims 40-48 are new added. Claims 1,3-13,23-25,27-32,34-39-48 are pending.
- 3.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 23-24,27-32,40-48 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.
6. Claim 23 is directed to a computer-readable medium for storing instructions. The examiner respectfully asserts that the claimed subject matter does not fall within the statutory classes listed in 35 USC 101. Claim 23 is directed to a computer readable medium that includes data signals (See specification 0064). A signal does not fall within one of the four statutory classes of 101. Claims 40-48 are dependent on claim 23 and rejection on the same rationale.

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7. Claim 24 is directed an apparatus for restricting Address Resolution Protocol (ARP) table updates to updates originating from authorized subsystems. Claim 23 is rejected under 35 U.S.C. 101 because the claimed invention directed to non-statutory subject matter. Claim 23 is an apparatus claim without any structural component and consists solely of language that is implemented with only software. Claim 23 does not provide any functional interrelationship to any software and hardware structural components to provide certain function that is processed by a computer. Claims 27-32 are depend on claim 23 and rejects on the same rational.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1,3,6-8,10-11,23-25,27,30-32,34,37-39,40,43-45,47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma et al (hereinafter referred as Sharma) US 6,754,716 in view of Beser et al (hereinafter referred as Beser) US Patent No 6,170,061.

10. As per claims 1,23-25:Sharma discloses a method/computer-readable medium/apparatus of restricting Address Resolution Protocol (ARP) table updates to updates originating from authorized subsystems, the method comprising: receiving an instruction to update an ARP table (See Fig 6 step 602 and col 2 lines 39-43); determining whether the particular subsystem within

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the network device from which the instruction originated is authorized (See Fig 6 step 604 and col 3 lines 12-34, Fig 1 step 106); and only if the particular subsystem is authorized (See Fig 6 step 604 and col 3 lines 12-34), then updating the ARP table based on the instruction (See Fig 6 step 606 and col 2 lines 55-65 and col 7 lines 9-19).

Sharma does not explicitly teach wherein determining that the particular subsystem is authorized comprises determining that the particular subsystem is a Dynamic Host Configuration Protocol (DHCP) server, an authentication, authorization, accounting (AAA) server or a Network Translator (NAT); and only if the particular subsystem is authorized, then updating the ARP table based on the instruction.

However Beser teaches determining that the particular subsystem is authorized comprises determining that the particular subsystem is a Dynamic Host Configuration Protocol (DHCP) server, an authentication, authorization, accounting (AAA) server or a Network Translator (NAT) (See Fig 7B step 150 and Fig 11B steps 202, 204, 206, 208); and only if the particular subsystem is authorized, then updating the ARP table based on the instruction (See Fig 11B steps 202, 204, 206, 208).

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the teaching method of Beser within Sharma method in order to enhance security of the system.

11. As per claims 3, 27, 34, 40: the combination of Sharma and Beser disclose the method wherein determining authorized comprise determining whether the particular subsystem is a Dynamic Host Configuration Protocol (DCHP) server is authorized. (See Fig 6 step 604 and col 3 lines 12-34).

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12. As per claims 6,30,37,43: the combination of Sharma and Beser disclose the method further comprising: if the particular subsystem is not authorized, then preventing the ARP table from being updated based on the instruction (See Sharma Fig 5 step 504)

13. As per claims 7,31,38,44: the combination of Sharma and Beser disclose the method further comprising: if the particular subsystem is not authorized, then performing the steps of: determining whether a particular network interface through which the instruction was received is contained in a set of one or more specified network interfaces (See Sharma col 5 line 44 through col 6 line 10 and Fig 5 steps 502, 504); if the particular network interface is contained in the set, then preventing the ARP table from being updated based on the instruction (See Sharma Fig 5 step 504 and col 7 line 1-9); and if the particular network interface is not contained in the set, then updating the ARP table based on the instruction(See Sharma Fig 5 step 504 and col 7 line 1-9).

14. As per claims 8,32,39,45: the combination of Sharma and Beser disclose the method further comprising: if the particular subsystem is not authorized, then performing the steps of: determining whether a particular network address indicated by the instruction is contained in a set of one or more specified network address (See Sharma col 5 line 44 through col 6 line 10 and Fig 5 steps 502, 504); if the particular network address is contained in the set, then preventing the ARP table from being updated based on the instruction (See Sharma Fig 5 step 504 and col 7 line 1-9); and if the particular network address is not contained in the set, then updating the ARP table based on the instruction(See Sharma Fig 5 step 504 and col 7 line 1-9).

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15. As per claims 10,47: the combination of Sharma and Beser disclose the method wherein the ARP table is updated only in response to instructions that are not ARP message (See Sharma Sharma col 3 lines 6-34).

16. As per claims 11,48: the combination of Sharma and Beser disclose the method wherein determining whether the particular system is authorized comprises determining whether the particular subsystem is a Hypertext Transfer Protocol (HTTP) server (See Sharma col 4 lines 22-51).

17. **Claims 4-5,28-29,35-36,41-42,46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma et al (hereinafter referred as Sharma) US 6,754,716 in view of Beser et al (hereinafter referred as Beser) US Patent No 6,170,061 and further in view of Wilson (US Pub No 2001/0054101).**

18. As per claims 4,28,35,41: the combination of Sharma-Beser discloses claim 1,23-25 as recited above. Sharma-Beser do not disclose the method wherein determining whether the particular system is authorized comprises determining whether the particular subsystem is NAT server.

However Wilson teaches the method wherein determining whether the particular system is authorized comprises determining whether the particular subsystem is NAT server. (See 0007 Fig 3 steps 314,316)

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the teaching method of Wilson within the combination of Sharma and Beser in order to enhance security of the system.

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19. As per claims 5,29,36,42: the combination of Sharma-Beser disclose claims 1,23-25 as recited above. Sharma-Beser do not disclose the method wherein determining whether the particular system is authorized comprises determining whether the particular subsystem is an authentication authorization accounting (AAA) server.

However Wilson teaches the method wherein determining whether the particular system is authorized comprises determining whether the particular subsystem is NAT server. (See 0007 Fig 3 steps 314,316)

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the teaching method of Wilson within the combination of Sharma and Beser in order to enhance security of the system.

20. Claims 9,46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma et al (hereinafter referred as Sharma) US 6,754,716 in view of Beser et al (hereinafter referred as Beser) US Patent No 6,170,061 and in further view of Massarani (US 6,393,484 B1).

21. As per claim 9,46: the combination of Sharma-Beser disclose claims 1,23 as recited above. The combination of Sharma-Beser do not disclose the method comprising determining whether a specified amount of time has passed since a time indicated by a timestamp associated with an entry in the ARP table; and if the specified amount of time has passed then removing the entry from the ARP table.

However Massarani teaches the method comprising determining whether a specified amount of time has passed since a time indicated by a timestamp associated with an entry in the

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ARP table (See abstract and See Fig 7 steps 701); and if the specified amount of time has passed then removing the entry from the ARP table (See abstract and See Fig 7 steps 701).

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the method disclosed by Sharma-Beser to include determining whether a specified amount of time has passed since a time indicated by a timestamp associated with an entry in the ARP table and if the specified amount of time has passed then removing the entry from the ARP table.

This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so, as suggested by Massarani (See col 3 lines 16-19) in order to prevent unauthorized devices and users from obtaining network services in a dynamic user address environment.

Allowable Subject Matter

11. Claims 12-13 are allowed.

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fikremariam Yalew whose telephone number is 5712723852. The examiner can normally be reached on 9-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Moazzami Nasser can be reached on 571-272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Fikremariam Yalew
08/17/2008
FA

Art Unit 2136

/Nasser G Moazzami/
Supervisory Patent Examiner, Art Unit 2136

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